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Cortland E. Richmond  
1211 Mateo Drive  
Rohnert Park, CA  
94928  
11 December, 2004

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Secretary  
Federal Communications Commission  
Washington. D.C. 20554

RE: Petition for Reconsideration of BPL rule

Respected Commissioners and staff members:

I am a Radio Amateur, a longtime short wave listener, and have worked in Electromagnetic Compatibility Engineering for over 20 years. I am filing this Petition for Reconsideration to make good what I see as deficiencies in FCC docket 04-37 (Report and Order 02-425), which concerns FCC oversight and specific regulation of expanded Broadband over Power Lines, or BPL.

I am sending 14 copies of this Petition and a signed original to the Commission at 9300 East Hampton Drive, Capitol Heights, MD 20743, by Federal Express. It is also filed electronically by means of the Electronic Comment Filing System (ECFS).

Because I believe the BPL Rule is flawed, I urge the Commission to consider this petition seriously.

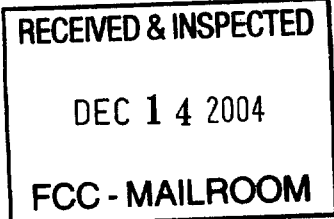
Sincerely,



Cortland E. Richmond

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554



In the Matter of	)	
	)	
Expansion and Oversight of	)	FCC Docket 04-37
Broadband over Power Lines	)	
(BPL) Operations	)	

To: The Commission December 11, 2004

**PETITION FOR RECONSIDERATION OF BPL RULE (DOCKET 04-17)**

Petitioner is a short wave listener, enjoying the use of short wave broadcasting to stay in touch with cultures and viewpoints not usually presented on US broadcast media. Petitioner has been an Amateur Radio operator since the late 1950's, and served over 21 years in the Army in communications and electronics. The petitioner has been employed as an EMI/EMC engineer since late 1983.

This petition respectfully requests that the Commission reconsider, for reasons enumerated and stated below, the Rule Making issued regarding Broadband over Power Lines, hereinafter referred to as BPL; that it refrain from permitting BPL deployment until the issues raised have been better resolved, and that it make such modifications to the Rule as Petitioner requests.

## I Issues

### 1. BPL is different from other Part 15 Uses

BPL represents a new way of distributing broadband, high-speed Internet service where connectivity is otherwise limited, an opportunity to profit by serving heretofore underserved businesses and consumers, and another means of utility data connectivity. However, BPL achieves this by a technological quantum leap which does not well fit, and should not have been permitted under, Part 15.

a. Compliance with the limits of Part 15 is not non-interference, merely a prescribed level of interference. Non-compliance with Part 15 is demonstrated as soon as harmful interference is experienced. This is incorporated in Part 15 at 15.5(b) and 15.15(c). (This demonstration, which should have been part of the test procedure, was overlooked in Comments and Reply Comments including the present petitioner's.)

b. That ubiquity which makes BPL attractive also insures that radio interference at Part 15 levels will be present everywhere it is used, which makes it practically impossible for those who need to receive radio signals to do so in the places they need to be. The radio user with a portable set in his own home is often not even 30 meters from conductors radiating the BPL signals they carry, the permitted levels are practically speaking continuous, and are usually stronger than what he needs to hear.

c. The broadband nature of BPL signals, unlike other Part 15 radiators so far, does not allow listeners to tune elsewhere for reception. This is especially true in the High Frequency spectrum, where reception is dependent on propagation which favors certain bands at certain times for given paths, and for Services to which the Commission has assigned specific frequencies from which they may not deviate.

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d. To the extent that BPL is regulated by Part 15, results to date have been dismal, with interference many times greater than the radio signals Part 15 should protect, and, sometimes, radiated field strengths noted above Part 15 limits in spite of repeated assurances from BPL providers that they comply. This may in part be due to manufacturers' and users' lack of control over radiating structures on which BPL is carried, but given that Part 15 relies on the cooperation of those it regulates, and their ability to make such changes as are needed, this demonstrates it is unsuitable at regulating BPL.

e. Some BPL systems are spectrally equivalent, with emissions similar in receivers, to sporadic Class B (damped) emissions, i.e.: spark gaps. Class B emissions are prohibited under 15.5(c) by reason of their harmful effect, and these systems should also be prohibited for BPL.

f. Utility and government data connectivity, if as important as proponents say, should not be entrusted to Part 15, which may suffer from, and must accept, interference from other spectrum users, including licensed services. A person or persons who suffered injury or loss as a result of such an imprudent reliance, might well be understood if he later called it negligence.

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Commissioners, before permitting BPL deployment, repeatedly demonstrated they were acting as "cheerleaders" for BPL, exhibiting an unseemly and it may be, prohibited partisanship. The Commission is certainly not, in this proceeding, as pure in appearance as Caesar's wife.

### 3. The Rule fails to sufficiently protect radio listeners

The Commission has failed its responsibility to radio listeners by permitting BPL to be deployed without adequately considering the thousands BPL will prevent from listening to radio stations they would otherwise be able to receive. This is evident in the Rule, whose wording offers some protection for technically skilled Amateur Radio operators, but little for the less knowledgeable; their use of the radio spectrum will be denied by interference the sources of which they will have been inadequately informed about, generated by parties with whom they have no ready contact, and parties, moreover, who are committed to react only belatedly to such complaints as do reach them.

Indeed, the Commission resolution procedure fails its own test; for over-the-air (OTA) television, the Commission forbids enacting complex approval processes for antennas, deeming that an unlawful hindrance to such reception. Radio listeners are just as much hindered by the procedure the Commission has prescribed in the Rulemaking.

### 4. The Rule contravenes the Radio Treaty

The Commission by its action places the United States in contravention of the Radio Treaty, which guarantees protection of licensed radio services from harmful interference.

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2. In permitting BPL deployment here, the Commission does not protect those abroad whose investments will be rendered less valuable by the lack of listeners here, thereby inflicting financial harm on them.

## 5. The Rule harms other enforcement

The Commission and BPL proponents seem to have adopted the legal theory that if no one complains, there are no violations. This is equivalent to asserting that if no speeding tickets are written, no one is speeding, from which follows the colloquial saying: "No cop, no stop." If enforcement depends only on complaints rendered difficult to submit, response to which is delayed or obstructed, people will stop submitting complaints. Interference does not go away if no one responds to it.

Just as it is in everyone's interest that drivers do stop at stop signs, even if no officer is present, so too is it in everyone's interest, including the Commission's, that interference be not merely penalized, but prevented. Part 15 has had some deterrent effect. However, the number of violations the Commission is asked to investigate and prosecute will multiply many times over if BPL is deployed everywhere power lines run; the Commission already fails to enforce all but the most egregious violations, and harms its reputation thereby.

Any enforcement agency knows that its success depends not so much on the agents it may employ as on the cooperation of those it watches. If BPL deployment goes forward and Part 15 is not rigorously enforced, compliance in other areas will be harmed; conversely, if every valid BPL interference complaint is investigated, the Commission will be strapped to meet its other responsibilities, and will become ineffective. Only a strong BPL rule now can avert these consequences.

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Petitioner in earlier Comment asked that the Commission require BPL conducted emissions testing. Petitioner continues to believe monitoring conducted emissions of BPL equipment, at least in the laboratory, will catch deviations, and afford a record which may translate to an easier to accomplish test later. Conducted emissions are tested for other equipment because they correlate with radiation from power lines and BPL is not less amenable to this.

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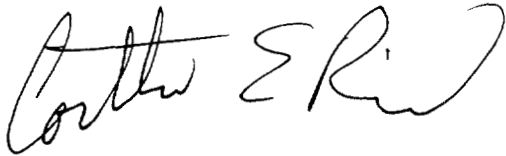
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2. Because BPL interference cannot be avoided:  
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Require BPL providers and equipment manufacturers to satisfactorily replace or otherwise adequately compensate owners and users of, radios and systems which emissions from BPL render impractically useable.
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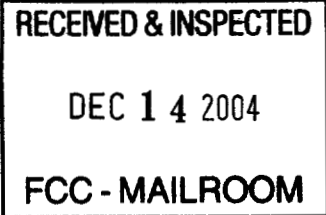
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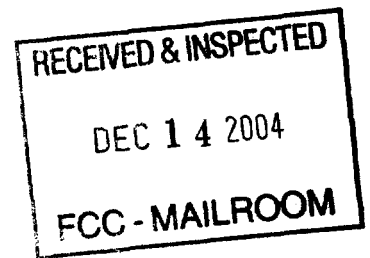
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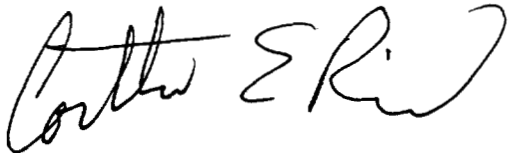
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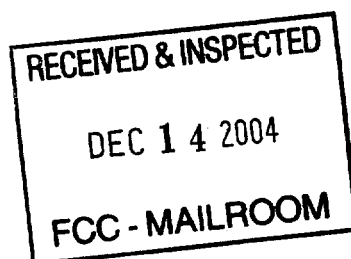
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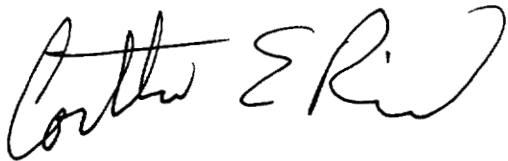
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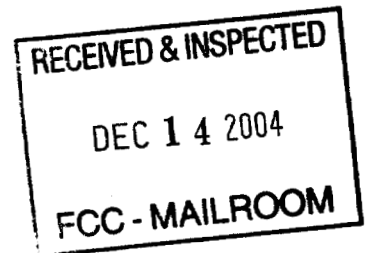
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I am a Radio Amateur, a longtime short wave listener, and have worked in Electromagnetic Compatibility Engineering for over 20 years. I am filing this Petition for Reconsideration to make good what I see as deficiencies in FCC docket 04-37 (Report and Order 02-425), which concerns FCC oversight and specific regulation of expanded Broadband over Power Lines, or BPL.

I am sending 14 copies of this Petition and a signed original to the Commission at 9300 East Hampton Drive, Capitol Heights, MD 20743, by Federal Express. It is also filed electronically by means of the Electronic Comment Filing System (ECFS).

Because I believe the BPL Rule is flawed, I urge the Commission to consider this petition seriously.

Sincerely,

A handwritten signature in black ink that reads "Cortland E. Richmond". The signature is fluid and cursive, with the first and last names being more prominent.

Cortland E. Richmond

RECEIVED & INSPECTED  
DEC 14 2004  
FCC - MAILROOM

FCC Docket 04-37

**PETITION FOR RECONSIDERATION OF BPL RULE (DOCKET 04-17)**

This petition respectfully requests that the Commission reconsider, for reasons enumerated and stated below, the Rule Making issued regarding Broadband over Power Lines, hereinafter referred to as BPL; that it refrain from permitting BPL deployment until the issues raised have been better resolved, and that it make such modifications to the Rule as Petitioner requests.

## I Issues

### 1. BPL is different from other Part 15 Uses

BPL represents a new way of distributing broadband, high-speed Internet service where connectivity is otherwise limited, an opportunity to profit by serving heretofore underserved businesses and consumers, and another means of utility data connectivity. However, BPL achieves this by a technological quantum leap which does not well fit, and should not have been permitted under, Part 15.

a. Compliance with the limits of Part 15 is not non-interference, merely a prescribed level of interference. Non-compliance with Part 15 is demonstrated as soon as harmful interference is experienced. This is incorporated in Part 15 at 15.5(b) and 15.15(c). (This demonstration, which should have been part of the test procedure, was overlooked in Comments and Reply Comments including the present petitioner's.)

b. That ubiquity which makes BPL attractive also insures that radio interference at Part 15 levels will be present everywhere it is used, which makes it practically impossible for those who need to receive radio signals to do so in the places they need to be. The radio user with a portable set in his own home is often not even 30 meters from conductors radiating the BPL signals they carry, the permitted levels are practically speaking continuous, and are usually stronger than what he needs to hear.

c. The broadband nature of BPL signals, unlike other Part 15 radiators so far, does not allow listeners to tune elsewhere for reception. This is especially true in the High Frequency spectrum, where reception is dependent on propagation which favors certain bands at certain times for given paths, and for Services to which the Commission has assigned specific frequencies from which they may not deviate.

1. BPL is different from other Part 15 Uses( continued)

d. To the extent that BPL is regulated by Part 15, results to date have been dismal, with interference many times greater than the radio signals Part 15 should protect, and, sometimes, radiated field strengths noted above Part 15 limits in spite of repeated assurances from BPL providers that they comply. This may in part be due to manufacturers' and users' lack of control over radiating structures on which BPL is carried, but given that Part 15 relies on the cooperation of those it regulates, and their ability to make such changes as are needed, this demonstrates it is unsuitable at regulating BPL.

e. Some BPL systems are spectrally equivalent, with emissions similar in receivers, to sporadic Class B (damped) emissions, i.e.: spark gaps. Class B emissions are prohibited under 15.5(c) by reason of their harmful effect, and these systems should also be prohibited for BPL.

f. Utility and government data connectivity, if as important as proponents say, should not be entrusted to Part 15, which may suffer from, and must accept, interference from other spectrum users, including licensed services. A person or persons who suffered injury or loss as a result of such an imprudent reliance, might well be understood if he later called it negligence.

2. The Commission improperly favored the petitioners

Commissioners, before permitting BPL deployment, repeatedly demonstrated they were acting as "cheerleaders" for BPL, exhibiting an unseemly and it may be, prohibited partisanship. The Commission is certainly not, in this proceeding, as pure in appearance as Caesar's wife.

### 3. The Rule fails to sufficiently protect radio listeners

The Commission has failed its responsibility to radio listeners by permitting BPL to be deployed without adequately considering the thousands BPL will prevent from listening to radio stations they would otherwise be able to receive. This is evident in the Rule, whose wording offers some protection for technically skilled Amateur Radio operators, but little for the less knowledgeable; their use of the radio spectrum will be denied by interference the sources of which they will have been inadequately informed about, generated by parties with whom they have no ready contact, and parties, moreover, who are committed to react only belatedly to such complaints as do reach them.

Indeed, the Commission resolution procedure fails its own test; for over-the-air (OTA) television, the Commission forbids enacting complex approval processes for antennas, deeming that an unlawful hindrance to such reception. Radio listeners are just as much hindered by the procedure the Commission has prescribed in the Rulemaking.

### 4. The Rule contravenes the Radio Treaty

The Commission by its action places the United States in contravention of the Radio Treaty, which guarantees protection of licensed radio services from harmful interference.

1. If the Soviet Union had in the days of the Cold War deployed BPL to prevent reception of the Voice of America or Radio Free Europe, the United States would have, rightly, complained that it was hindering the free flow of information between nations. It is not less a hindrance when the listeners are US citizens wishing to hear broadcasters licensed elsewhere.

2. In permitting BPL deployment here, the Commission does not protect those abroad whose investments will be rendered less valuable by the lack of listeners here, thereby inflicting financial harm on them.

#### 5. The Rule harms other enforcement

The Commission and BPL proponents seem to have adopted the legal theory that if no one complains, there are no violations. This is equivalent to asserting that if no speeding tickets are written, no one is speeding, from which follows the colloquial saying: "No cop, no stop." If enforcement depends only on complaints rendered difficult to submit, response to which is delayed or obstructed, people will stop submitting complaints. Interference does not go away if no one responds to it.

Just as it is in everyone's interest that drivers do stop at stop signs, even if no officer is present, so too is it in everyone's interest, including the Commission's, that interference be not merely penalized, but prevented. Part 15 has had some deterrent effect. However, the number of violations the Commission is asked to investigate and prosecute will multiply many times over if BPL is deployed everywhere power lines run; the Commission already fails to enforce all but the most egregious violations, and harms its reputation thereby.

Any enforcement agency knows that its success depends not so much on the agents it may employ as on the cooperation of those it watches. If BPL deployment goes forward and Part 15 is not rigorously enforced, compliance in other areas will be harmed; conversely, if every valid BPL interference complaint is investigated, the Commission will be strapped to meet its other responsibilities, and will become ineffective. Only a strong BPL rule now can avert these consequences.

#### 6. The Rule does not sufficiently track compliance

Petitioner in earlier Comment asked that the Commission require BPL conducted emissions testing. Petitioner continues to believe monitoring conducted emissions of BPL equipment, at least in the laboratory, will catch deviations, and afford a record which may translate to an easier to accomplish test later. Conducted emissions are tested for other equipment because they correlate with radiation from power lines and BPL is not less amenable to this.

## II Relief Sought

Petitioner asks that the Commission amend the Final Rule to accomplish in total or in part the following:

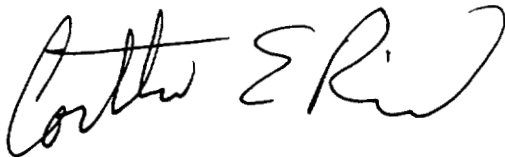
1. Because of the interference potential of Class B and similar emissions:  
Prohibit deployment of BPL systems whose emissions are equivalent in effect to Class B emissions forbidden at 15.5(c).
2. Because BPL interference cannot be avoided:  
Prohibit deployment of BPL systems which do not demonstrate, in addition to compliance with 15.209, the absence of harmful interference to actual signals received at places where reception might be reasonably expected by residential, fixed, portable and mobile users.
3. To provide equity when harm is done:  
Require BPL providers and equipment manufacturers to satisfactorily replace or otherwise adequately compensate owners and users of, radios and systems which emissions from BPL render impractically useable.
4. Because interference does not keep business hours:  
Require operators of BPL systems to respond immediately to interference complaints by notching and, if notching is judged insufficient by complainant, disabling operation in the frequency bands complainants wish to receive, prior to and without Commission order, as if otherwise at 15.5(c).
5. To firmly establish that where reliability is required, licensing must be sought:  
Prohibit reliance upon Part 15 BPL for Homeland Security, safety of life and property, or law enforcement.
6. To monitor for deviations and allow easier testing:  
Require BPL conducted emissions testing.

III

Conclusion

For all the reasons above, petitioner strongly urges the Commission to act favorably and modify the final rule in Docket 04- 37 according to the requests contained herein.

Respectfully submitted:

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Cortland E. Richmond

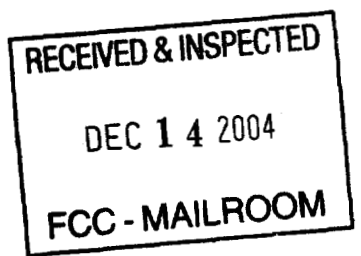
ka5s@earthlink.net  
1211 Mateo Drive  
Rohnert Park, CA  
94928

(707) 694 8608

Dated: 11 December 2004  
11 DECEMBER, 2004



Cortland E. Richmond  
1211 Mateo Drive  
Rohnert Park, CA  
94928  
11 December, 2004



Secretary  
Federal Communications Commission  
Washington. D.C. 20554

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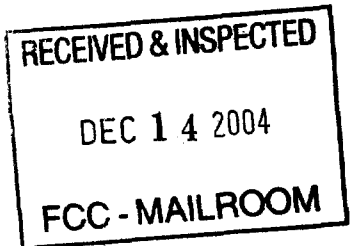
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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554



In the Matter of )  
 )  
Expansion and Oversight of ) FCC Docket 04-37  
Broadband over Power Lines )  
(BPL) Operations )

To: The Commission December 11, 2004

**PETITION FOR RECONSIDERATION OF BPL RULE (DOCKET 04-17)**

Petitioner is a short wave listener, enjoying the use of short wave broadcasting to stay in touch with cultures and viewpoints not usually presented on US broadcast media. Petitioner has been an Amateur Radio operator since the late 1950's, and served over 21 years in the Army in communications and electronics. The petitioner has been employed as an EMI/EMC engineer since late 1983.

This petition respectfully requests that the Commission reconsider, for reasons enumerated and stated below, the Rule Making issued regarding Broadband over Power Lines, hereinafter referred to as BPL; that it refrain from permitting BPL deployment until the issues raised have been better resolved, and that it make such modifications to the Rule as Petitioner requests.

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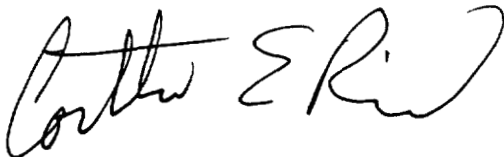
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Dated: 11 December 2004  
11 DECEMBER, 2004